

**REMARKS**

Applicants thank the Examiner for the thorough consideration given the present application. Claims 32-66 are currently being prosecuted. Claim 32-35 have been amended. Claims 36-56 and claims 61-63 have been withdrawn. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth hereinbelow.

***Request for Withdrawal of Final Rejection / Reasons for Entry of Reply***

At the outset, it is respectfully submitted that the Examiner has erred in his rejection of the claims. As argued below, independent claim 57, as previously presented, and the claims depending therefrom fully comply with the written description requirement as required by 35 U.S.C. 112, first paragraph. In addition, the Applicants respectfully submit that independent claim 57 as previously presented sets forth a combination of elements not taught or suggested by the references cited by the Examiner.

The only amendments made by way of this Amendment are amendments made to claims 32-35 to address the issues pointed out by the Examiner under 35 U.S.C. 112, first and second paragraph. The last Office Action dated October 4, 2005 issued by the Examiner provided no indication that claims 32-35 contained any problems or issues that would warrant rejections under 35 U.S.C. 112, first or second paragraph.

It is therefore requested that the Finality of the Rejection be Withdrawn, and that this Amendment be entered into the Official File in view of the fact that independent claim 57 as previously presented, and independent claim 32 as amended herein automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that this Amendment be entered for the purpose of appeal. This Amendment reduces the issues on appeal by amending the claims to be in compliance with 35 U.S.C. 112, first and second paragraphs.

This Amendment was not presented at an earlier date in view of the fact that the Examiner has just now presented new grounds for rejection in this Final Office Action.

**Restriction Requirement**

In this Office Action, the Examiner has rejoined claims 64 and 65 with the elected claims. Thus, as best understood by the Applicants, claims 36-56 and 61-63 are now withdrawn from consideration.

However, in the Office Action dated October 4, 2005, the Examiner states that at least claim 57 is generic. It is respectfully submitted that the election of species requirement is improper in view of the fact that a reasonable number of species are set forth in the present application. Therefore, inasmuch as claims 61-63 depend from generic independent claim 57, it is respectfully requested that claims 61-63 be rejoined and considered by the Examiner.

Clarification is respectfully requested in the next official communication.

**Rejection Under 35 U.S.C. § 112, first paragraph**

Claims 32-35, 57-60 and 64-66 stand rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. This rejection is respectfully traversed.

Regarding independent claim 32, the Examiner asserts that "the claimed subject matter of *"as substance layer on an inner surface of the at least partly heat conducting walls or plates"* is not supported by the original disclosure. It appears in Fig. 2a, that the substance layer (23) is located on a surface of the wall but it is not an inner surface of the wall. Furthermore, the claimed subject matter of *"gas transport channels arranged at outer surfaces of the substance layers, opposite inner surfaces of the substance layers located at the inner surfaces of the at least partly heat conducting walls or plates"* is not supported by the original disclosure".

Regarding independent claim 57, the Examiner asserts that "the claimed subject matter of *"the active solid substance all the time having a fixed location"* is not described by the original disclosure".

The Applicants respectfully submit that the Examiner is incorrect.

The Examiner will note that independent claim 32 has been amended to provide further clarity, and that independent claim 57 remains as previously presented.

In the present invention, an active substance is used that remains in a solid state, in the substance layers, for example as indicated in independent claim 32, all the time during loading and unloading.

This also is apparent from the Title of the present invention and from multiple places in the specification, see for example:

page 3, line 14: "The substance must at all instances during the process remain in a solid state",

page 3, lines 20-22: "The substance must be mechanically stable and is not allowed to change its structure in time or have significant changes of the outer physical shape thereof when it absorbs and emits gas",

page 3, lines 27-28: "The substance must be capable of being applied to surfaces of heat exchangers and must not be apt to be detached therefrom; i.e. it must be rigidly attached to the surfaces",

page 5, lines 25-27: "The substances are very reactive with water vapour and have no difficulties neither in discharging or charging",

page 6, lines 14 - 15: "The chemical substance can be integrated with the heat exchanger unit to form a compact unit",

page 8, lines 33 - 34: "The substance layer is at its side opposite the large surface 21 limited by a perforated metal structure such as thin perforated metal plate 26 or a metal grating",

page 10, line 33: "Another requirement is that the substance is not allowed to deliquesce", and

page 11, lines 7 - 10: "The condition that the substance is not allowed to deliquescence can in short be termed in the way that at the actual temperatures no risk is allowed that the substance spontaneously becomes dissolved when it is exposed to an unlimited amount of water vapour".

The Applicants respectfully submit that independent claim 32, as amended, and independent claim 57, as previously presented, are fully supported by and adequately

described in the written description of the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

**Rejection Under 35 U.S.C. § 112, second paragraph**

Claims 32-35 and 66 stand rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

The Examiner has set forth certain instances wherein the claim language is not clearly understood. However, on page 3, last lines of the Office Action, the Examiner states "... *applicant is not able* ..." which seems very confusing. Otherwise, this sentence appears, if this phrase is changed to "... *it is not possible* ...", to be incorrect. For example, on page 2 of the Office Action, the Examiner himself points to Fig. 2a from which the locations of the space, the walls or plates, the substance layers and the gas channels are clearly visible and identifiable for reading the claim.

Further, as noted above, independent claim 32 has been amended to provide further clarity.

At least for the reasons described above, the Applicants respectfully submit that the claims, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Independent claim 32 and the claims depending therefrom are in condition for allowance.

**Rejection Under 35 U.S.C. §103(a)**

Claims 57-60 and 64-65 stand rejected under 35 U.S.C. §103(a) as being unpatentable over AAPA in view of Foulke (U.S. 4,146,013). This rejection is respectfully traversed.

Independent claim 57 as previously presented sets forth a combination of elements directed to a chemical heat pump, including *inter alia*

the active solid substance exothermally absorbing and endothermally desorbing the sorbate.

In contrast to the present invention of claim 57, Foulke merely discloses a substance interacting with a liquid sorbate and thus uses phase transitions that are different from those used in the invention. Hence, the disclosure of Foulke is related to another process and cannot be used in combination to anticipate the invention as defined in independent claim 57.

At least for the reasons described above, the Applicants respectfully submit that the combination of elements as set forth in independent claim 57 is not disclosed or made obvious by the prior art of record, including AAPA and Foulke. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Independent claims 57 and the claims depending therefrom are in condition for allowance.

*Application No. 09/863,406*  
*Reply dated December 26, 2006*  
*Reply to Office Action dated June 17, 2006*

*Docket No. 1291-0183P*  
*Art Unit: 3743*  
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**CONCLUSION**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030 (Direct Line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

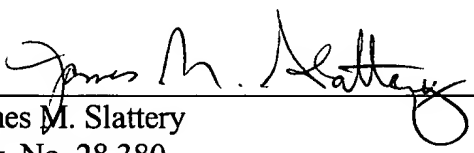
Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

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JMS/CTT/jmh



By   
James M. Slattery  
Reg. No. 28,380  
P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000